
Subject: Turntable hum

Posted by [Anonymous](#) on Wed, 16 Nov 2005 23:48:30 GMT

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Hello!! have a Dual CS 505-2 belt-driven turntable, an Ortofon 305 cartridge (soon to purchase an OM 30), RCA AH500 preamplifier and the following problem: intense hum in both channels. So intense that I can barely hear the music. The hum can be heard as soon as the amplifier is turned on, even when the motor is not used and the record is not spinning. I tried swapping the wires connected to the cartridge with no change. My turntable has a grounding wire that is not connected to anything, although I tried connecting it to the back of my computer with no change also. One interesting thing is... when I attached the grounding wire to one of the RCA connections, the hum disappeared completely, although music was playing loud enough only in the right channel; I could barely hear it in the left channel. Any input is welcome! Does anyone else have similar equipment and experience a similar problem? Any suggestions on how to ground the turntable and/or eliminate the hum? Thank you very much in advance.

Subject: Re: Turntable hum

Posted by [Bill Epstein](#) on Thu, 17 Nov 2005 08:24:45 GMT

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Attach the ground wire from the table to the pre-amp chassis. The result of grounding to one RCA should make that work. If not, there's a ground loop 'tween components. Try unplugging one component at a time until the hum goes away.

Subject: Re: Turntable hum

Posted by [Anonymous](#) on Thu, 17 Nov 2005 18:42:00 GMT

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Thank you, Bill, for your input! Actually, I did try doing so, but it did not help. My pre-amp has a grounding post, but connecting to it did not solve the problem. See here: <http://www.audioannex.com/showthreaded.php?Cat=&Board=4&Number=58318&page=0&view=collapsed&sb=5&o=0>. Thanks again!

Subject: Re: Turntable hum

Posted by [Manualblock](#) on Thu, 17 Nov 2005 19:09:51 GMT

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Thats a pretty old unit. It sounds like you have bad RCA jacks. First: does the other inputs on the pre-amp work? The aux and Tape? Next; have you tried the table through another amp? Next have you checked continuity from the ground lug on the RCA to ground on the chassis? If you have a multi-meter you can check easily. Tell us if you are up to troubleshooting this problem.

Subject: Re: Turntable hum

Posted by [Anonymous](#) on Thu, 17 Nov 2005 21:14:15 GMT

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Dear manualblock, Yes, the turntable was made in 1985 and it is a decent one, if not the problem that I am having. My pre-amp has only two input channels and two output channels, nothing else, and it is specifically a phono (turntable) pre-amp. Unfortunately, I do not have another pre-amp, but this one is fine. I tried running other devices through it and there was no hum. I did check the continuity of the grounding wire from the RCA to the ground on the chassis and it is fine. Yes, I am to troubleshooting the problem. Thanks for helping!

Subject: Re: Turntable hum

Posted by [Manualblock](#) on Thu, 17 Nov 2005 21:29:21 GMT

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O'Kay then it has to be easy. Either the cartridge is bad or the internal wiring of the tonearm has a problem. Before we check that though can you tell me what exactly you used to test the inputs of the pre-amp? Was it another low level source like a turntable?

Subject: Re: Turntable hum

Posted by [Anonymous](#) on Fri, 18 Nov 2005 00:24:11 GMT

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There MIGHT be a problem with the cartridge, but I doubt it. I had another cartridge (Ortofon OM 10) and my turntable produced just the same noise. In fact, it does so even if the cartridge is not connected. I tried running my computer audio output and my tape player through the preamp, and it worked well. (They do not need that, but I did it for the sake of testing). Just a few minutes ago I thought about connecting the grounding wire to a power outlet's grounding post, but for that I need to modify the power and the grounding wires of my turntable. I can cut off the original plug, buy a 3-pin plug and safely connect the power wires and the grounding wire to it, after which it will be easy to use. Do you think it will work? Thanks.

Subject: Re: Turntable hum

Posted by [Manualblock](#) on Fri, 18 Nov 2005 17:59:14 GMT

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No. Don't do that and remember we told you not to. There is something not adding up here. Can you tell us what other tests you have tried? Maybe we can find the problem.

Subject: Re: Turntable hum

Posted by [Anonymous](#) on Sat, 19 Nov 2005 03:30:16 GMT

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See this:

<http://www.audioannex.com/showthreaded.php?Cat=&Board=4&Number=58326&page=0&view=collapsed&sb=5&o=0> And my response to that:

<http://www.audioannex.com/showthreaded.php?Cat=&Board=4&Number=58329&page=0&view=collapsed&sb=5&o=0> I do not believe that there is something wrong with the turntable. I strongly believe that the problem is due to improper grounding (I tried a few ways, except the one that you suggest me not to try).

Subject: Re: Turntable hum

Posted by [Manualblock](#) on Sat, 19 Nov 2005 12:55:09 GMT

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O'Kay; lets see. Can you indicate if there are any other grounding schemes you are using on the rest of your set-up? Like three into two prong plugs or say; Plugging your amp into the back of the pre-amp, those kind of things. I had a problem once with the wall out let forming a ground loop and the only way to alleviate it was to float the pre-amp by removing the third pin; the ground pin on it's plug. Next can you tell a little about the pre-amp; what it's phono stage looks like; does it have a ground screw or post dedicated to the phono?

Subject: Re: Turntable hum

Posted by [Anonymous](#) on Sun, 20 Nov 2005 04:50:01 GMT

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My set up is really simple. Turntable --> preamp --> speakers/headphones. The preamp itself is grounded; it has a 3-pin power plug and it has never been altered in any way. The phono stage, if I understand you correctly (I may not be very familiar with terminology), consists of two RCA-type

input jacks (one is for the left channel, and another is for the right channel) and two RCA-type output jacks. No other jacks, just these four. The preamp does have a grounding post, but I am not sure if it is "dedicated to the phono", although it should be, because turntables is what this preamp is made for. I tried grounding my turntable to this post, but it did not help.

Subject: Re: Turntable hum

Posted by [Manualblock](#) on Sun, 20 Nov 2005 13:23:50 GMT

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Well; let me ask; you must have the pre-amp connected to a amp in there somewhere. Can you tell us what that is and how it is connected. See; if you have isolated the pre-amp and that is not the cause; you've isolated the turntable and you say that is not the cause then we know this; the pre-amp has no problem internally since it works independent of your existing system. The turntable motor is not affecting the cartridge causing hum. The turntable you say worked with another system so that is good internally. This leaves only the possibility of an external connection problem. Either in the wiring between components or in the grounding scheme coming off the wall. If the pre-amp has a three pronged plug and the turntable has a three pronged plug and the amp also; all going into the house outlet; that's your problem, then you need to float one of the components with a three to two prong adapter because you are creating a ground loop.

Subject: Re: Turntable hum

Posted by [Anonymous](#) on Sun, 20 Nov 2005 23:21:11 GMT

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My amplifier is inside my speakers. They are computer speakers and, like most, have an amplifier built in. Speakers work fine with my computer and all other devices, so they are not the cause of this problem. I tried connecting the grounding wire to the grounding post of my outlet, but the problem is still there. Literally, I grounded my turntable like I would ground any other device that needs to be grounded. Having this, I begin to think that the problem is really "Either in the wiring between components or in the grounding scheme coming off the wall." as you said. Tomorrow, I am going to check the inside of my turntable and if everything appears to be fine, then I will have talk to my building's superintendent about the faulty outlets...Thanks for keeping in touch!

Subject: Re: Turntable hum

Posted by [Anonymous](#) on Mon, 21 Nov 2005 01:48:09 GMT

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By the way, do you have any suggestions on what and how I should check inside the turntable?

Subject: Re: Turntable hum
Posted by [Manualblock](#) on Mon, 21 Nov 2005 12:38:59 GMT
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Just let me ask; did you say you tried the table with another amplifier?

Subject: Re: Turntable hum
Posted by [Anonymous](#) on Mon, 21 Nov 2005 16:43:49 GMT
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Setup 1: the preamp (RCA AH500) and the amplifier built into my speakers. Setup 2: the preamp and the amplifier built into my TV. These are the only two ways that I tried to set up my turntable.

Subject: Re: Turntable hum
Posted by [Manualblock](#) on Mon, 21 Nov 2005 18:36:18 GMT
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And you got hum both ways?

Subject: Re: Turntable hum
Posted by [Anonymous](#) on Mon, 21 Nov 2005 18:43:21 GMT
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That is right.

Subject: Re: Turntable hum
Posted by [Anonymous](#) on Mon, 21 Nov 2005 18:55:05 GMT
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A series of interesting experiments I did: 1. I tried powering my preamp from one circuit and my turntable from another (had to use an extension cord), not from the same as I did before. No difference. I kept it connected separately until the end of this series of experiments. 2. I tried disconnecting the cartridge. No difference. Then I connected it back. 3. In addition to the hum, I

noticed some quiet irregular sounds, short buzzes in particular.4. Before grounding the turntable, I would get a slight decrease in hum intensity when I touch the platform or the tonearm. Now, having it grounded, it makes no difference whether I touch them or not.5. Having everything connected I tried touching the RCA plugs with my hands. This did make a difference: the hum intensity decreased slightly.6. I tried unplugging the turntable out of the power outlet. This did make a difference: the hum intensity decreased a little more than in # 5 and those sounds (see # 3) disappeared.7. I tried unplugging the turntable's RCA cables out of the preamp. This did make a difference: the hum disappeared completely. (Wow! Now I can really enjoy the music!)8. The most interesting one! I unplugged the turntable out of the power outlet and began touching the RCA connectors (without disconnection them) with the turntable's power plug prongs. The hum disappeared ALMOST completely. Then I touched the RCA connectors with the grounding prong and the hum disappeared completely.Sad and funny. Now I am trying to come up with a more precise idea of what might be wrong...

Subject: Re: Turntable hum
Posted by [Anonymous](#) on Mon, 21 Nov 2005 18:55:51 GMT
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See this: <http://audioroundtable.com/Turntable/messages/1211.html>

Subject: Re: Turntable hum
Posted by [Manualblock](#) on Wed, 23 Nov 2005 01:17:49 GMT
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This is a different kind of problem considering you are patching into the computer. I have heard that some soundcards are not compatible with some phono stages but don't know why that would be; but the symptom is loud hum so maybe that is the problem.Let me ask you; does the hum change with the volume control? Does it get louder or softer?

Subject: Re: Turntable hum
Posted by [Anonymous](#) on Wed, 23 Nov 2005 02:47:24 GMT
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Yes, it does. And I get this hum no matter what I connect my turntable to or through.

Subject: Re: Turntable hum

Posted by [Manualblock](#) on Wed, 23 Nov 2005 11:21:56 GMT

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Ever modify or change anything on the table? Also; which cartridge do you use? Last; have you checked the continuity of the tonearm wiring and AC Line input?

Subject: Re: Turntable hum

Posted by [Anonymous](#) on Wed, 23 Nov 2005 21:53:34 GMT

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No, never myself. Maybe the previous owner did. I am using an Ortofon OM 305 cartridge. Want to buy an Ortofon OM 30 as soon as I fix the problem. It gives off hum even when the cartridge is disconnected. Not sure about continuity of the tonearm wiring and AC line input. (Let me ask you: why AC? Isn't it operated by DC?) On weekends I will borrow my friend's multimeter and check the turntable from A to Z. I was also give a suggestion to purchase a noise filter. Could that be helpful?

Subject: Re: Turntable hum

Posted by [Anonymous](#) on Wed, 23 Nov 2005 21:54:36 GMT

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Sorry. Not sure if it is an "OM 305", but it clearly says "ortofon 305" on the cartridge.

Subject: Re: Turntable hum

Posted by [Manualblock](#) on Thu, 24 Nov 2005 00:12:31 GMT

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That turntable uses a DC wal-wart? Then chances are it is not the table; could be the soundcard. This is pretty interesting; we'll get to the bottom of it. Have you tried another cartridge by any chance?

Subject: Re: Turntable hum

Posted by [Anonymous](#) on Thu, 24 Nov 2005 12:37:39 GMT

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Do you mean a computer sound card? Yes, I have a crappy one, but it is definitely not the source of the problem. I tried connecting my turntable DIRECTLY to my computer speakers (well, through the preamp, of course), without the help of my computer. No matter how and through what I connect it, it gives off that hum. It is a hundred percent turntable-caused problem. Unfortunately, I have not yet tried using a different cartridge. I do want to buy a new one, and I was thinking, maybe I should go and buy it now, even before I fix the problem? I will purchase a brand new turntable sometime anyway, so I will need one. For now, I could use it on my old turntable. Let me think... And on weekends I am going to post the results of the test.

Subject: Re: Turntable hum
Posted by [Manualblock](#) on Thu, 24 Nov 2005 13:02:41 GMT
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Excellent. Why not try a cheap cartridge for now and see if that causes any change? Should be able to find one in one of those DJ stores for 25\$ that you could troubleshoot with. I use a Stanton 500 I paid 39\$ for on my Technics SL 1300 downstairs and it sure sounds nice. Tracks anything and has great bass.

Subject: Re: Turntable hum
Posted by [Anonymous](#) on Sun, 27 Nov 2005 16:17:35 GMT
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Hello! Just checked the continuity of the tonearm wiring to the ground - it is fine. Also tried my turntable with another cartridge - same thing.

Subject: Re: Turntable hum
Posted by [Manualblock](#) on Wed, 30 Nov 2005 12:42:05 GMT
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Then we are left with an overloaded input to the soundcard or a ground loop in the AC line sequence; that's pretty much what it is. Try a two prong adapter in the turntable plug in to the wall.

Subject: Re: Turntable hum
Posted by [Anonymous](#) on Sun, 04 Dec 2005 06:18:23 GMT

Thanks! Well, very soon I am going to buy a brand new turntable, so it is becoming not as important...
